

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 7, 2005, 07:04:17 ; Search time 16.1259 Seconds
(without alignments)
1193.323 Million cell updates/sec

Title: US-09-939-537-31_COPY_1_200
Perfect score: 1029
Sequence: 1 NMRGVPFRHLVLQGLALP.....TWTCTVLQNGKVEPKDIIV 200

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database :
1: p1r1:*
2: p1r2:*
3: p1r3:*
4: p1r4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysts of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1023	99.4	458	1 RWHUT4	T-cell surface gly
2	875	85.0	432	1 RMCZT4	T-cell surface gly
3	790	76.8	432	1 RMCQ74	T-cell surface gly
4	587.5	57.1	459	2 A46254	CD4 precursor - ra
5	562	54.6	432	2 S30193	T-cell surface gly
6	488.5	47.5	457	2 A27449	T-cell surface gly
7	475	46.2	457	1 RWM574	T-cell surface gly
8	357	34.7	71	2 160082	CD4 receptor - hum
9	305.5	29.7	99	2 S21461	T-cell surface gly
10	280.5	27.3	99	2 S21462	T-cell surface gly
11	140.5	13.7	538	2 JC2457	vascular cell adhe
12	127	12.3	1259	2 S36126	neural cell adhe
13	124	12.1	739	2 JS0675	vascular cell adhe
14	124	12.1	1260	1 S05479	neural cell adhe
15	118.5	11.5	338	2 JC4776	limbic-system-asso
16	117	11.4	739	2 A41288	vascular cell adhe
17	117	11.4	1011	2 T13669	neurofascin - fir
18	115	11.2	6831	2 A88852	protein unc-22 [im
19	115	11.2	6839	2 SS7822	tylactin [isimilari
20	115	11.2	7160	2 T27935	hypothetical prote
21	111.5	10.8	120	2 S46374	ig kappa chain V-J
22	111	10.8	1197	2 T30581	neural cell adhesi
23	110.5	10.7	338	2 JC5519	50K glycoprotein p
24	110	10.7	521	2 S34338	billiary glycoprote
25	110	10.7	739	2 JN0581	vascular cell adhe
26	109.5	10.6	304	2 S04663	T-cell receptor ga
27	109.5	10.6	398	2 I49443	gene 2B4 protein -
28	109	10.6	1091	2 A58532	glial cell membran
29	109	10.6	1367	2 A41228	protein-tyrosine k

30	108.5	10.5	333	2 A31923	amalgam protein pr
31	108	10.5	257	2 S00682	IGB Fc receptor al
32	107.5	10.4	122	2 S40370	ig kappa chain - h
33	106.5	10.3	111	2 B37266	ig kappa chain V r
34	106.5	10.3	111	2 I38740	ig kappa chain V r
35	106.5	10.3	584	2 I50419	8-glycerin precursor
36	106.5	10.3	773	1 QRR86	secretory componen
37	106	10.3	345	2 S03199	opioid-binding pro
38	105	10.2	345	2 JC4025	opioid-binding cel
39	105	10.2	647	2 B41288	vascular cell adhe
40	104	10.1	458	2 UC1509	billiary glycoprote
41	103.5	10.1	103	2 S18731	ig kappa chain V-J
42	103.5	10.1	108	1 RVM506	ig kappa chain V r
43	103.5	10.1	117	2 S21668	ig kappa chain V r
44	103.5	10.1	129	1 K1HIMX	ig kappa chain pre
45	103	10.0	1028	2 A53449	plasmacytoma-asso

ALIGNMENTS

RESULT 1
RWHUT4
T-cell surface glycoprotein CD4 precursor [validated] - human
N:Alternate names: T-cell surface antigen T4/Lew 3
C:Species: Homo sapiens (man)
C>Date: 28-May-1986 #sequence revision 31-Dec-1988 #text change 09-Jul-2004
C:Accession: A90872; A32722; A4194; A53287; I54176; I54257; A02109; A20039
R:Maddon, P.J.; Littman, D.R.; Godfrey, M.; Maddon, D.E.; Chess, L.; Axel, R.
Cell 42, 93-104, 1985
A:Title: The isolation and nucleotide sequence of a cDNA encoding the T cell surface prot
A:Reference number: A90872; MUID:55254948; PMID:2990730
A:Accession: A90872
A:Molecule type: mRNA
A:Residues: 1-25, 'N', 27-458 <MAD>
A:Cross-references: UNIPROT:P01730
A:Experimental source: clone pT4B
R:Littman, D.R.; Maddon, P.J.; Axel, R.
Cell 55, 541, 1988
A:Title: Corrected CD4 sequence.
A:Reference number: A90907; MUID:89028665; PMID:3263213
A:Contents: annotation; revision to residue 26
R:Camerini, D.; Seed, B.
Cell 60, 747-754, 1990
A:Title: A CD4 domain important for HIV-mediated syncytium formation lies outside the vi
A:Reference number: A32722; MUID:90182664; PMID:2107024
A:Accession: A32722
A:Status: nucleic acid sequence not shown; not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 26-426, 428-458 <CAM>
R:Carri, S.A.; Henling, M.E.; Polena-Wasserman, G.; Sweet, R.W.; Annunzio, K.; Barr, J.R.;
J. Biol. Chem. 264, 21286-21295, 1989
A:Title: Protein and carbohydrate structural analysis of a recombinant soluble CD4 recep
A:Reference number: A34194; MUID:90078232; PMID:2592374
A:Contents: disulfide bonds; carbohydrate-binding sites
A:Accession: A34194
A:Molecule type: protein
A:Residues: 26-394 <CAR>
R:Lederman, S.; Demartino, J.A.; Daugherty, B.L.; Poeldvari, I.; Yellin, M.J.; Cleary, A
Mol. Immunol. 28, 1171-1181, 1991
A:Title: A single amino acid substitution in a common African allele of the CD4 molecule
A:Reference number: A53287; MUID:92072595; PMID:1961196
A:Accession: A53287
A:Status: not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 250-264, 'W', 266-280 <LED>
R:Note: sequence extracted from NCBI backbone (NCBI:68249)
R:Edwards, M.C.; Gibbs, R.A.
Genomics 14, 590-597, 1992
A:Title: A human dimorphism resulting from loss of an Alu.
A:Reference number: I54176; MUID:93052387; PMID:1330888
A:Accession: I54176
A:Status: translated from GB/EMBL/DBSJ

A:Molecule type: DNA
A:Residues: 1-72 <RES>
A:Cross-references: GB:U47924; GB:M86525; GB:U72506; NID:91633547; PIDN:AA51309.1; PID:R.Hodge, T.W.; Sasso, D.R.; McQuay, J.S.
Hum. Immunol. 30, 99-104, 1991
A:Title: Humans with OKT4-epitope deficiency have a single nucleotide base change in the A:Reference number: 154297; MUID:91216786; PMID:11708753
A:Accession: 154297
A:Status: translated from GB/EMBL/DBD
A:Molecule type: DNA
A:Residues: 1-264, 'W', 266-458 <RE2>
A:Cross-references: GB:M35160; NID:9179143; PIDN:AAA16069.1; PID:9179144
A:Comment: Macrophage tropic strains of HIV-1 bind to a complex of chemokine (C-C) recep
C:Genetics:
A:Gene: GDB:CD4
A:Cross-references: GDB:119767; OMIM:186940
A:Map position: 12pter-12p12
A:Intons: 16/3
C:Superfamily: T-cell surface glycoprotein CD4; immunoglobulin homology
C:Keywords: AIDS; duplication; glycoprotein; T-cell; transmembrane protein
F:1-25/Domain: signal sequence #status predicted <SIG>
F:36-458/Product: T-cell surface glycoprotein CD4 #status experimental <MAT>
F:34-111/Domain: immunoglobulin homology <IM1>
F:136-186/Domain: immunoglobulin homology #status atypical <IM2>
F:216-299/Domain: immunoglobulin homology <IM3>
F:321-372/Domain: immunoglobulin homology <IM4>
F:397-420/Domain: transmembrane #status predicted <TM>
F:421-458/Domain: intracellular #status predicted <INT>
F:41-109,155-184,328-370/Disulfide bonds: #status experimental
F:296,325/Binding site: carbohydrate (Asn) #status experimental

Query Match 99.4%; Score 1023; DB 1; Length 458;
Best Local Similarity 99.5%; Pred. No. 2, 1e-75;
Matches 199; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MNRGVPFRHLVLTQALPAATQGNKVLTGKKGDTVELTCTASQKKSIOFHWKNSNOIK 60
DB 1 MNRGVPFRHLVLTQALPAATQGNKVLTGKKGDTVELTCTASQKKSIOFHWKNSNOIK 60
QY 61 ILNQGSPFLTKGSKINDRADSRSLMDQGNFPLTIKNLKIETSDPTICVEVDQKEEVOL 120
DB 61 ILNQGSPFLTKGSKINDRADSRSLMDQGNFPLTIKNLKIETSDPTICVEVDQKEEVOL 120
QY 121 LVFGLTANSDPTHLQSGSLTLTLESPGSSPVQCRSPRGKNIQGGKTLVSQLELQDSG 180
DB 121 LVFGLTANSDPTHLQSGSLTLTLESPGSSPVQCRSPRGKNIQGGKTLVSQLELQDSG 180
QY 181 TWTCVTVLONQKVEFKIDIV 200
DB 181 TWTCVTVLONQKVEFKIDIV 200

RESULT 2
RMCT4
T-cell surface glycoprotein CD4 - chimpanzee
N:Alternate names: T-cell surface antigen T4/Leu 3
C:Species: Pan troglodytes (chimpanzee)
C>Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 09-Jul-2004
C:Accession: B32722; A46534
R:Camertini, D.; Seed, B.
Cell 60, 747-754, 1990
A:Title: A CD4 domain important for HIV-mediated syncytium formation lies outside the vi
A:Reference number: A32722; MUID:90182664; PMID:2107024
A:Accession: B32722
A:Molecule type: mRNA
A:Residues: 1-432 <CAM>
A:Cross-references: UNIPROT:P16004; GB:M31135
R:Fromsgaard, A.; Hirsch, V.M.; Johnson, P.R.
Eur. J. Immunol. 22, 2973-2981, 1992
A:Title: Cloning and sequences of primate CD4 molecules: diversity of the cellular recep
A:Reference number: A46534; MUID:93049640; PMID:1425921
A:Accession: A46534
A:Status: not compared with conceptual translation

A:Molecule type: mRNA
A:Residues: 3-399 <ROM>
A>Note: Sequence extracted from NCBI backbone (NCBIP:118332)
C:Comment: This protein is expressed on most thymocytes, on a subset of mature T-cells
C:Superfamily: T-cell surface glycoprotein CD4; immunoglobulin homology
C:Keywords: duplication; glycoprotein; T-cell; transmembrane protein
F:1-432/Product: T-cell surface glycoprotein CD4 #status predicted <MAT>
F:1-371/Domain: extracellular #status predicted <EXT>
F:9-86/Domain: immunoglobulin homology <IM1>
F:111-161/Domain: immunoglobulin homology #status atypical <IM2>
F:191-274/Domain: immunoglobulin homology <IM3>
F:296-347/Domain: immunoglobulin homology <IM4>
F:372-395/Domain: transmembrane #status predicted <TM>
F:396-432/Domain: intracellular #status predicted <INT>
F:16-84,130-159,303-345/Disulfide bonds: #status predicted
F:271,300/Binding site: carbohydrate (Asn) #status predicted

Query Match 85.0%; Score 875; DB 1; Length 432;
Best Local Similarity 97.7%; Pred. No. 1, 9e-63;
Matches 170; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 27 KVLGKKGDTVELTCTASQKKSIOFHWKNSNOIKILNQGSPFLTKGSKINDRADSRSL 86
DB 2 KVLGKKGDTVELTCTASQKKSIOFHWKNSNOIKILNQGSPFLTKGSKINDRADSRSL 86
QY 87 WQGNFPLTIKNLKIETSDPTICVEVDQKEEVOLVFGITANSDPTHLQSGSLTLTLESP 146
DB 62 WQGNFPLTIKNLKIETSDPTICVEVDQKEEVOLVFGITANSDPTHLQSGSLTLTLESP 121
QY 147 PSSSPVQCRSPRGKNIQGGKTLVSQLELQDSGTMTCVTVLONQKVEFKIDIV 200
DB 122 PSSSPVQCRSPRGKNIQGGKTLVSQLELQDSGTMTCVTVLONQKVEFKIDIV 175

RESULT 3
RMQT4
T-cell surface glycoprotein CD4 - rhesus macaque
N:Alternate names: T-cell surface antigen T4/Leu 3
C:Species: Macaca mulatta (rhesus macaque)
C>Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 16-Jul-1999
R:Camertini, D.; Seed, B.
Cell 60, 747-754, 1990
A:Title: A CD4 domain important for HIV-mediated syncytium formation lies outside the vi
A:Reference number: A32722; MUID:90182664; PMID:2107024
A:Accession: C32722
A:Molecule type: mRNA
A:Residues: 1-432 <CAM>
A:Cross-references: GB:M31134
A:Comment: This protein is expressed on most thymocytes, on a subset of mature T-cells
C:Superfamily: T-cell surface glycoprotein CD4; immunoglobulin homology
C:Keywords: duplication; glycoprotein; T-cell; transmembrane protein
F:1-432/Product: T-cell surface glycoprotein CD4 #status predicted <MAT>
F:1-371/Domain: extracellular #status predicted <EXT>
F:9-86/Domain: immunoglobulin homology <IM1>
F:111-161/Domain: immunoglobulin homology #status atypical <IM2>
F:180-293/Domain: immunoglobulin homology <IM3>
F:296-347/Domain: immunoglobulin homology <IM4>
F:372-395/Domain: transmembrane #status predicted <TM>
F:396-432/Domain: intracellular #status predicted <INT>
F:16-84,130-159,303-345/Disulfide bonds: #status predicted
F:271,300/Binding site: carbohydrate (Asn) #status predicted

Query Match 76.8%; Score 790; DB 1; Length 432;
Best Local Similarity 87.4%; Pred. No. 1, 5e-56;
Matches 152; Conservative 12; Mismatches 10; Indels 0; Gaps 0;

QY 27 KVLGKKGDTVELTCTASQKKSIOFHWKNSNOIKILNQGSPFLTKGSKINDRADSRSL 86
DB 2 KVLGKKGDTVELTCTASQKKSIOFHWKNSNOIKILNQGSPFLTKGSKINDRADSRSL 61
QY 87 WQGNFPLTIKNLKIETSDPTICVEVDQKEEVOLVFGITANSDPTHLQSGSLTLTLESP 146
DB 87 WQGNFPLTIKNLKIETSDPTICVEVDQKEEVOLVFGITANSDPTHLQSGSLTLTLESP 146

Db 62 IDQGCFSSIIINKIKEDSDTYICEVENKEEVELLVPELTANSDTHLLEQSLTLTLESP 121

Qy 147 PGSSPSVOCRRPRGKNIOGKTLVSQLELQDSGTWCTTVLQNOQKVEFKIDIV 200
Db 122 PGSSPSVOCRRPRGKNIOGKTLVSQLELQDSGTWCTTVLQNOQKVEFKIDIV 175

RESULT 4

CD4 precursor - rabbit
A46254

C/Species: Oryctolagus cuniculus (domestic rabbit)
C/Date: 21-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004
C/Accession: A46254

R/Hague, B.F.; Savaadikosol, S.; Brown, T.J.; Lee, K.; Recker, D.P.; Kindt, T.J.
Proc. Natl. Acad. Sci. U.S.A. 89, 7963-7967, 1992
A/Title: CD4 and its role in infection of rabbit cell lines by human immunodeficiency virus
A/Reference number: A46254; MUID:92390370; PMID:1518821
A/Accession: A46254
A/Status: preliminary
A/Molecule type: mRNA
A/Residues: 1-459 <HAG>
A/Cross-references: UNIPROT:P46630; GB:M92840; NID:G164871; PIDN:AAA31198.1; PID:G16487272/2004
A/Note: sequence extracted from NCBI backbone (NCBI:112732, NCBI:P:112733)
C/Superfamily: T-cell surface glycoprotein CD4; immunoglobulin homology
F/322-372/Domain: immunoglobulin homology <IMM>

Query Match 57.1%; Score 587.5; DB 2; Length 459;
Best Local Similarity 58.5%; Pred. No. 4.2e-40;
Matches 120; Conservative 34; Mismatches 46; Indels 5; Gaps 2;

Qy 1 MNRGVPRHLILVQLALPPAATGKNTVGGKEDTVLTAAQKSIQPHMKNSNQIK 60
Db 1 MNRGVPRHLILVQLALPPAATGKNTVGGKEDTVLTAAQKSIQPHMKNSNQIK 60
Qy 61 ILGNQ-----SFLTKGPSKLNDRADRSRLMDQGNPLIINKLTIKIDSDTYICEVEDQKE 116
Db 61 ILGNQSSSSSSFFLTKGPSKLNDRADRSRLMDQGNPLIINKLTIKIDSDTYICEVEDQKE 120
Qy 117 EVQLVLEGLTANSDTHLLQGSLLTLTLESPPGSSPSVOCRRPRGKNIOGKTLVSQLEL 176
Db 121 EVQLVLEGLTANSDTHLLQGSLLTLTLESPPGSSPSVOCRRPRGKNIOGKTLVSQLEL 180
Qy 177 QDSGTWCTTVLQNOQKVEFKIDIV 200
Db 181 QDSGTWCTTVLQNOQKVEFKIDIV 205

RESULT 5

S30193

T-cell surface glycoprotein CD4 - dog
C/Species: Canis lupus familiaris (dog)
C/Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 21-Jul-2000
C/Accession: S30193

R/Milde, K.F.; Comer, G.E.; Mintz, D.H.; Alejandro, R.
Biochim. Biophys. Acta 1172, 315-318, 1993
A/Title: Primary structure of the canine CD4 antigen.
A/Reference number: S30193; MUID:93192324; PMID:7916632
A/Accession: S30193
A/Status: preliminary
A/Molecule type: mRNA
A/Residues: 1-432 <ML>
A/Cross-references: EMBL:X68565; NID:9288652; PIDN:CAB37664.1; PID:94467377
C/Superfamily: T-cell surface glycoprotein CD4; immunoglobulin homology
C/Keywords: glycoprotein
F/202-311/Domain: immunoglobulin homology <IMM>

Query Match 54.6%; Score 562; DB 2; Length 432;
Best Local Similarity 55.1%; Pred. No. 4.6e-38;
Matches 109; Conservative 37; Mismatches 42; Indels 10; Gaps 2;

Qy 12 LVQLALPPAATGKNTVGGKEDTVLTAAQKSIQPHMKNSNQIKILGNGSFLTK 71
Db 1 LVQLALPPAATGKNTVGGKEDTVLTAAQKSIQPHMKNSNQIKILGNGSFLTK 60

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QY 72 GSKINDRSDRSRLDQGNFPLIIINKLIEDSDTYICEVEDQKEEVQLVFGTA----- 127
Db 61 GSRLLKRVKESKKNLMDQSPFLVYKQLEVADSGIFYCDI-DKQGEVELLVFNLTAKRDS 119
QY 128 -----NSDTHLLQGGSLTTLTLESPGSSPSVQCRSPRGKNIQGGKTLVSQLEIQDSGTW 162
Db 120 GSSGSSSNIRLLQGGQLTTLLENPSSGSSPVQWKGKGNKSKHGGQNLSTLWPELQDGTW 179
QY 183 TCTVLQNGKQKEFKIDIV 200
Db 180 TCIISQSQKTEVFENIVL 197

RESULT 6
A27449
T-cell surface glycoprotein CD4 precursor - rat
N:Alternate names: W3/25 antigen
C:Species: Rattus norvegicus (Norway rat)
C:Date: 21-May-1988 #sequence_revision 21-May-1988 #text_change 09-Jul-2004
C:Accession: A27449; A35433
R:Clack, S.O.; Jeffries, W.A.; Barclay, A.N.; Gagnon, J.; Williams, A.F.
Proc. Natl. Acad. Sci. U.S.A. 84, 1649-1653, 1987
A:Title: Peptide and nucleotide sequences of rat CD4 (W3/25) antigen: evidence for derivative
A:Reference number: A27449; MUID:87175535; PMID:3104900
A:Accession: A27449
A:Molecule type: mRNA
A:Residues: 1-457 <CLa>
A:Cross-references: UNIPROT:P05540; GB:M15768; NID:g203387; PID:AAA40901.1; PID:g203388
R:David, S.J.; Ward, H.A.; Puklavec, M.J.; Willis, A.C.; Williams, A.F.; Barclay, A.N.
J. Biol. Chem. 265, 10410-10418, 1990
A:Title: High level expression in Chinese hamster ovary cells of soluble forms of CD4 T
A:Reference number: A35433; MUID:90285164; PMID:2113054
A:Contents: annotation
C:Superfamily: T-cell surface glycoprotein CD4, immunoglobulin homology
C:Keywords: glycoprotein; membrane protein; surface antigen
F:219-300/Domain: immunoglobulin homology <IMM>

Query Match 47.5%; Score 488.5; DB 2; Length 457;
Best Local Similarity 49.0%; Pred. No. 4.5e-32;
Matches 99; Conservative 34; Mismatches 66; Indels 3; Gaps 2;

QY 1 MNRGVPFPHL--LTVLTALALPAATQGNKRVVLGKKGDTVELTCTASQKKSIOFHKRNSNQ 58
Db 1 MCRGSPFHLPLPLLLQLSKLVVYQGTKVVLGKGGSAELPEESTSRBSASFAMKSSDQ 60
QY 59 IKILNQGSFLTKGPSKLNDRADRSRLMDQGNFPLIIINKLIEDSDTYICEVEDQKEEV 118
Db 61 KTLLEYKKNLTKGSLLEYRSPDSRRNAWERSGFPLIINKLRMEDSOTVYCELENKKEEV 120
QY 119 OLTVGLTANSDTHLLQGGSLTTLTLES-PPGSSPSVQCRSPRGKNIQGGKTLVSQLEIQ 177
Db 121 ELWVRVTFNPETRIQLQGGSLTTLIDSNPKVSDPPECKGKSNIVKDSFAFSTHSLRIQ 180
QY 178 DSGTWTCTVLQNGKQKEFKIDI 199
Db 181 DSGIMNCVTYTLNQKKHSPDKL 202

RESULT 7
RMMST4
T-cell surface glycoprotein CD4 precursor - mouse
N:Alternate names: T-cell differentiation antigen L3T4; T-cell surface antigen T4/Leu 3
C:Species: Mus musculus (house mouse)
C:Date: 30-Jun-1987 #sequence_revision 30-Jun-1987 #text_change 09-Jul-2004
C:Accession: A02110; A26038; A3893; A39955; I54564; I69018; A47642
R:Tourville, B.; Gorman, S.D.; Field, E.H.; Hunkapiller, T.; Parnes, J.R.
Science 234, 610-614, 1986
A:Title: Isolation and sequence of L3T4 complementary DNA clones: expression in T cells
A:Reference number: A02110; MUID:87018845; PMID:3094146
A:Accession: A02110
A:Molecule type: mRNA
A:Residues: 1-457 <TDU>

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A/Cross-references: UNIPROT:P06332; GB:M13816; NID:g192070; PIDN:AAA37267.1; PID:g309112
R:Littman, D.R.; Gettner, S.N.
Nature 325, 453-455, 1987
A/Title: Unusual intron in the immunoglobulin domain of the newly isolated murine CD4 (L
A/Reference number: A26038; MUID:87115821; PMID:3027575
A/Accession: A26038
A/Molecule type: mRNA
A/Residues: 1-457 <LIT>
A/Cross-references: GB:X04836; NID:g50353; PIDN:CAA28539.1; PID:g50354
R:Gorman, S.D.; Tourville, B.; Parnes, J.R.
Proc. Natl. Acad. Sci. U.S.A. 84, 7644-7648, 1987
A/Title: Structure of the mouse gene encoding CD4 and an unusual transcript in brain.
A/Reference number: A39893; MUID:88041159; PMID:2823269
A/Accession: A39893
A/Molecule type: DNA
A/Residues: 1-25, 'E', 27-457 <GOR>
A/Cross-references: GB:M17080; GB:J03003; NID:g192515; PIDN:AAA37402.1; PID:g387124
R:Maddon, P.U.; Molinieux, S.M.; Maddon, D.E.; Zimmerman, K.A.; Godfrey, M.; Alt, F.W.;
Proc. Natl. Acad. Sci. U.S.A. 84, 9155-9159, 1987
A/Title: Structure and expression of the human and mouse T4 genes.
A/Reference number: A39955; MUID:88097446; PMID:3501122
A/Accession: A39955
A/Status: nucleic acid sequence not shown; not compared with conceptual translation
A/Molecule type: mRNA
A/Residues: 25-457 <MAD>
A/Note: the cited GenBank accession number, J03564, is not in release 101.0
R:Parnes, J.R.; Hunkapiller, T.
Immunol. Rev. 100, 109-127, 1987
A/Title: L3T4 and the immunoglobulin gene superfamily: New relationships between the imm
A/Reference number: I54564; MUID:88152875; PMID:3326818
A/Accession: I54564
A/Status: translated from GB/EMBL/DBJ
A/Molecule type: mRNA
A/Residues: 1-457 <RES>
A/Cross-references: GB:M36850; NID:g198670; PIDN:AAA39401.1; PID:g198671
A/Accession: I69018
A/Status: translated from GB/EMBL/DBJ
A/Molecule type: DNA
A/Residues: 208-318 <RE2>
A/Cross-references: GB:M36851; NID:g198672; PIDN:AAA39402.1; PID:g554183
R:Classon, B.J.; Tsagaratos, J.; Kitzbaum, L.; Maddox, J.; Mackay, C.R.; Brandon, M.; M
Immunogenetics 23, 129-132, 1986
A/Title: The L3T4 antigen in mouse and the sheep equivalent are immunoglobulin-like.
A/Reference number: A47642; MUID:8616694; PMID:3082751
A/Accession: A47642
A/Molecule type: protein
A/Residues: 27-43 <CLA>
C/Comment: This protein is expressed on most thymocytes, on a subset of mature T-cells
C/Genetics:
A/Introns: 18/1, 74/1, 128/1, 207/1, 319/1, 386/1, 425/3, 448/2
C/Superfamily: T-cell surface glycoprotein CD4; immunoglobulin homology
C/Keywords: alternative initiators; duplication; glycoprotein; T-cell; transmembrane pro
F/1-26/Domain: signal sequence #status predicted <SIG>
F/27-457/Product: T-cell surface glycoprotein CD4 #status experimental <MAT>
F/35-114/Domain: immunoglobulin homology <IM1>
F/139-190/Domain: immunoglobulin homology #status atypical <IM2>
F/220-301/Domain: immunoglobulin homology <IM3>
F/241-457/Product: CD4, brain-specific short form #status predicted <BRA>
F/321-372/Domain: immunoglobulin homology <IM4>
F/395-419/Domain: transmembrane #status predicted <TMW>
F/420-457/Domain: intracellular #status predicted <INT>
F/42-112, 159-188, 328-370/Disulfide bonds: #status predicted
F/187, 298, 323, 392/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 46.2%; Score 475; DB 1; Length 457;
Best Local Similarity 52.8%; Pred. No. 5, 5e-31;
Matches 104; Conservative 32; Mismatches 55; Indels 6; Gaps 5;

QY 1 NNRGVPRH-LIVLQALIPAAATGKGVVLTCTASQKSIQFHMKNNOIK 59
DB 1 MCRALSRRLILVLTQALVATGKGVVLTCTASQKSIQFHMKNNOIK 60
QY 60 KILNGG-SFLTK--PSKLNDRADSRRLMDOGPFLLIKLKIDSDTYICEVADQK 116

A/Cross-references: UNIPROT:P06332; GB:M13816; NID:g192070; PIDN:AAA37267.1; PID:g309112
R:Littman, D.R.; Gettner, S.N.
Nature 325, 453-455, 1987
A/Title: Unusual intron in the immunoglobulin domain of the newly isolated murine CD4 (L
A/Reference number: A26038; MUID:87115821; PMID:3027575
A/Accession: A26038
A/Molecule type: mRNA
A/Residues: 1-457 <LIT>
A/Cross-references: GB:X04836; NID:g50353; PIDN:CAA28539.1; PID:g50354
R:Gorman, S.D.; Tourville, B.; Parnes, J.R.
Proc. Natl. Acad. Sci. U.S.A. 84, 7644-7648, 1987
A/Title: Structure of the mouse gene encoding CD4 and an unusual transcript in brain.
A/Reference number: A39893; MUID:88041159; PMID:2823269
A/Accession: A39893
A/Molecule type: DNA
A/Residues: 1-25, 'E', 27-457 <GOR>
A/Cross-references: GB:M17080; GB:J03003; NID:g192515; PIDN:AAA37402.1; PID:g387124
R:Maddon, P.U.; Molinieux, S.M.; Maddon, D.E.; Zimmerman, K.A.; Godfrey, M.; Alt, F.W.;
Proc. Natl. Acad. Sci. U.S.A. 84, 9155-9159, 1987
A/Title: Structure and expression of the human and mouse T4 genes.
A/Reference number: A39955; MUID:88097446; PMID:3501122
A/Accession: A39955
A/Status: nucleic acid sequence not shown; not compared with conceptual translation
A/Molecule type: mRNA
A/Residues: 25-457 <MAD>
A/Note: the cited GenBank accession number, J03564, is not in release 101.0
R:Parnes, J.R.; Hunkapiller, T.
Immunol. Rev. 100, 109-127, 1987
A/Title: L3T4 and the immunoglobulin gene superfamily: New relationships between the imm
A/Reference number: I54564; MUID:88152875; PMID:3326818
A/Accession: I54564
A/Status: translated from GB/EMBL/DBJ
A/Molecule type: mRNA
A/Residues: 1-457 <RES>
A/Cross-references: GB:M36850; NID:g198670; PIDN:AAA39401.1; PID:g198671
A/Accession: I69018
A/Status: translated from GB/EMBL/DBJ
A/Molecule type: DNA
A/Residues: 208-318 <RE2>
A/Cross-references: GB:M36851; NID:g198672; PIDN:AAA39402.1; PID:g554183
R:Classon, B.J.; Tsagaratos, J.; Kitzbaum, L.; Maddox, J.; Mackay, C.R.; Brandon, M.; M
Immunogenetics 23, 129-132, 1986
A/Title: The L3T4 antigen in mouse and the sheep equivalent are immunoglobulin-like.
A/Reference number: A47642; MUID:8616694; PMID:3082751
A/Accession: A47642
A/Molecule type: protein
A/Residues: 27-43 <CLA>
C/Comment: This protein is expressed on most thymocytes, on a subset of mature T-cells
C/Genetics:
A/Introns: 18/1, 74/1, 128/1, 207/1, 319/1, 386/1, 425/3, 448/2
C/Superfamily: T-cell surface glycoprotein CD4; immunoglobulin homology
C/Keywords: alternative initiators; duplication; glycoprotein; T-cell; transmembrane pro
F/1-26/Domain: signal sequence #status predicted <SIG>
F/27-457/Product: T-cell surface glycoprotein CD4 #status experimental <MAT>
F/35-114/Domain: immunoglobulin homology <IM1>
F/139-190/Domain: immunoglobulin homology #status atypical <IM2>
F/220-301/Domain: immunoglobulin homology <IM3>
F/241-457/Product: CD4, brain-specific short form #status predicted <BRA>
F/321-372/Domain: immunoglobulin homology <IM4>
F/395-419/Domain: transmembrane #status predicted <TMW>
F/420-457/Domain: intracellular #status predicted <INT>
F/42-112, 159-188, 328-370/Disulfide bonds: #status predicted
F/187, 298, 323, 392/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 29.7%; Score 305.5; DB 2; Length 99;
Best Local Similarity 60.2%; Pred. No. 5e-18;
Matches 59; Conservative 16; Mismatches 22; Indels 1; Gaps 1;

QY 32 KKGDTVELCTASQKSIQFHMKNNOIKILGNGSFL-TGPKLNDRADSRRLMDOG 90
DB 1 KAGDLAEIPCHSSQKKNLPFMKNNSQTKILGNGSFWHTASVTELTSLDSKKNMDHG 60
QY 91 NFPLIKLKIEDSDTYICEVEDQKEVQALLVFGITAN 128

A/Cross-references: UNIPROT:P06332; GB:M13816; NID:g192070; PIDN:AAA37267.1; PID:g309112
R:Littman, D.R.; Gettner, S.N.
Nature 325, 453-455, 1987
A/Title: Unusual intron in the immunoglobulin domain of the newly isolated murine CD4 (L
A/Reference number: A26038; MUID:87115821; PMID:3027575
A/Accession: A26038
A/Molecule type: mRNA
A/Residues: 1-457 <LIT>
A/Cross-references: GB:X04836; NID:g50353; PIDN:CAA28539.1; PID:g50354
R:Gorman, S.D.; Tourville, B.; Parnes, J.R.
Proc. Natl. Acad. Sci. U.S.A. 84, 7644-7648, 1987
A/Title: Structure of the mouse gene encoding CD4 and an unusual transcript in brain.
A/Reference number: A39893; MUID:88041159; PMID:2823269
A/Accession: A39893
A/Molecule type: DNA
A/Residues: 1-25, 'E', 27-457 <GOR>
A/Cross-references: GB:M17080; GB:J03003; NID:g192515; PIDN:AAA37402.1; PID:g387124
R:Maddon, P.U.; Molinieux, S.M.; Maddon, D.E.; Zimmerman, K.A.; Godfrey, M.; Alt, F.W.;
Proc. Natl. Acad. Sci. U.S.A. 84, 9155-9159, 1987
A/Title: Structure and expression of the human and mouse T4 genes.
A/Reference number: A39955; MUID:88097446; PMID:3501122
A/Accession: A39955
A/Status: nucleic acid sequence not shown; not compared with conceptual translation
A/Molecule type: mRNA
A/Residues: 25-457 <MAD>
A/Note: the cited GenBank accession number, J03564, is not in release 101.0
R:Parnes, J.R.; Hunkapiller, T.
Immunol. Rev. 100, 109-127, 1987
A/Title: L3T4 and the immunoglobulin gene superfamily: New relationships between the imm
A/Reference number: I54564; MUID:88152875; PMID:3326818
A/Accession: I54564
A/Status: translated from GB/EMBL/DBJ
A/Molecule type: mRNA
A/Residues: 1-457 <RES>
A/Cross-references: GB:M36850; NID:g198670; PIDN:AAA39401.1; PID:g198671
A/Accession: I69018
A/Status: translated from GB/EMBL/DBJ
A/Molecule type: DNA
A/Residues: 208-318 <RE2>
A/Cross-references: GB:M36851; NID:g198672; PIDN:AAA39402.1; PID:g554183
R:Classon, B.J.; Tsagaratos, J.; Kitzbaum, L.; Maddox, J.; Mackay, C.R.; Brandon, M.; M
Immunogenetics 23, 129-132, 1986
A/Title: The L3T4 antigen in mouse and the sheep equivalent are immunoglobulin-like.
A/Reference number: A47642; MUID:8616694; PMID:3082751
A/Accession: A47642
A/Molecule type: protein
A/Residues: 27-43 <CLA>
C/Comment: This protein is expressed on most thymocytes, on a subset of mature T-cells
C/Genetics:
A/Introns: 18/1, 74/1, 128/1, 207/1, 319/1, 386/1, 425/3, 448/2
C/Superfamily: T-cell surface glycoprotein CD4; immunoglobulin homology
C/Keywords: alternative initiators; duplication; glycoprotein; T-cell; transmembrane pro
F/1-26/Domain: signal sequence #status predicted <SIG>
F/27-457/Product: T-cell surface glycoprotein CD4 #status experimental <MAT>
F/35-114/Domain: immunoglobulin homology <IM1>
F/139-190/Domain: immunoglobulin homology #status atypical <IM2>
F/220-301/Domain: immunoglobulin homology <IM3>
F/241-457/Product: CD4, brain-specific short form #status predicted <BRA>
F/321-372/Domain: immunoglobulin homology <IM4>
F/395-419/Domain: transmembrane #status predicted <TMW>
F/420-457/Domain: intracellular #status predicted <INT>
F/42-112, 159-188, 328-370/Disulfide bonds: #status predicted
F/187, 298, 323, 392/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 34.7%; Score 357; DB 2; Length 71;
Best Local Similarity 98.6%; Pred. No. 2.3e-22;
Matches 70; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 NNRGVPRH-LIVLQALIPAAATGKGVVLTCTASQKSIQFHMKNNOIK 60
DB 1 MCRALSRRLILVLTQALVATGKGVVLTCTASQKSIQFHMKNNOIK 60
QY 61 ILGNGSFLTK 71
DB 61 ILGNGSFLTK 71

RESULT 9
S21461
T-cell surface glycoprotein CD4 (allele 1) - pig (fragment)
C/Species: Sus scrofa domestica (domestic pig)
C/Date: 20-Feb-1995 #sequence_rev19-Apr-1996 #text_change 09-Jul-2004
C/Accession: I47131; S21461
R:Gustafsson, K.; Germana, S.; Sundt, T.M.
J. Immunol. 151, 1365-1370, 1993
A/Title: Extensive allelic polymorphism in the CDR2-like region of the miniature swine C
A/Reference number: I47131; MUID:93329116; PMID:8335933
A/Accession: I47131
A/Status: preliminary; translated from GB/EMBL/DBJ
A/Molecule type: mRNA
A/Residues: 1-99 <GU2>
A/Cross-references: UNIPROT:Q29027; EMBL:X65629; NID:g1928; PIDN:CAA46583.1; PID:g388232
C/Superfamily: T-cell surface glycoprotein CD4; immunoglobulin homology
C/Keywords: glycoprotein; T-cell
F/3-81/Domain: immunoglobulin homology <IMW>

A:Reference number: J50674; MUID:92181437; PMID:1371918
 A:Accession: J50675
 A:Status: nucleic acid sequence not shown
 A:Molecule type: mRNA
 A:Residues: 1-739 <HES>
 A:Cross-references: UNIPROT:P29534; GB:M84488; NID:9207642; PIDN:AAA42332.1; PID:9207643
 R:Williams, A.; Aktine, R.; Fries, J.; Glimbrone, M.A.; Cybulsky, M.I.; Collins, T.
 Submitted to the EMBL Data Library, February 1992
 A:Description: Nucleotide sequence of rat vascular cell adhesion molecule-1.
 A:Reference number: S19872
 A:Accession: S19872
 A:Molecule type: mRNA
 A:Residues: 1-2, 'G', 4-121, 'HU', 124-165, 'N', 167-738, 'G' <ML>
 A:Cross-references: EMBL:X63722; NID:957471; PIDN:CAA5254.1; PID:957472
 R:Williams, A.U.; Atkins, R.C.; Fries, J.W.U.; Glimbrone Jr., M.A.; Cybulsky, M.I.; Collins, T.
 Biochem. Biophys. Acta 1131, 214-216, 1992
 A:Title: Nucleotide sequence of rat vascular cell adhesion molecule-1 cDNA.
 A:Reference number: S23136; MUID:92305064; PMID:1377031
 A:Accession: S23136
 A:Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-2, 'G', 4-165, 'N', 167-738, 'G' <MI2>
 C:Comment: This protein interacts with the beta-1 integrin very late antigen 4 on leukoc
 C:Genetics:
 A:Gene: VCAM-1
 C:Keywords: cell adhesion; transmembrane protein
 F:1-24/Domain: signal sequence #status predicted <SIG>
 F:25-739/Product: vascular cell adhesion molecule 1 #status predicted <VAS>
 F:239-739/Product: immunoglobulin homology <IMM1>
 F:328-385/Domain: immunoglobulin homology <IMM2>
 F:526-581/Domain: immunoglobulin homology <IMM3>
 F:676-696/Domain: transmembrane #status predicted <TRA>
 F:697-715/Domain: intracellular #status predicted <INT>

Query Match 12.1%; Score 124; DB 2; Length 739;

Best Local Similarity 23.4%; Pred. No. 0.028; Matches 43; Conservative 30; Mismatches 71; Indels 40; Gaps 5;

Qy 33 KGDVLELTCTASQKSIQFMKNSNQIKLGNOSFLTTPKPSKLNDRASRRSLMDQNF 92
 Db 238 EGAAMTMTCASEGLPAEIPWMSK-----LDNGVLQL-----SGNA 274
 Qy 93 PLIKLIKIEDSDTYTIE---VEDQKEVQLV-----FGILANSDFHLQSGSLTLT 142
 Db 275 TLTLIARMEBSGVIYVEGVLVGRDKTEVELLYQEKPFVTVDISPGSQVAQVDSVVL 334
 Qy 143 LESPPSSPSVQCSPPGKNIOG-----GKTLVSQLELDSDGVTCTVLYLNQKKEF 195
 Db 335 CAAGCCSPSPSWRTQDPLNGEVRDEGATSTLTLSPVGVEDHSYLCTVTCQRRLEK 394
 Qy 196 KIDI 199
 Db 395 TIQV 398

RESULT 14

S05479
 A:Reference number: J505479; MUID:88318924; PMID:3412448
 A:Accession: S05479
 A:Molecule type: mRNA
 A:Residues: 1-1260 <MO>
 A:Cross-references: UNIPROT:P11627; EMBL:X12875; NID:953336; PIDN:CAA31368.1; PID:953337
 A:Note: The authors translated the codon CCT for residue 166 as Leu, ACT for residue 396
 A:Note: part of this sequence, including the amino end of the mature protein, was confir
 R:Rathjen, F.G.; Wolff, U.M.; Frank, R.; Bonhoeffer, F.; Rutishauser, U.
 J. Cell Biol. 104, 343-353, 1987

A:Title: Membrane glycoproteins involved in neurite fasciculation.
 A:Reference number: A60850; MUID:87109457; PMID:3805123

A:Accession: B60850
 A:Molecule type: protein
 A:Residues: 20-28, 'XX', 31-36 <RAT>
 R:Kohl, A.; Giese, K.P.; Mohajeri, M.H.; Montag, D.; Moos, M.; Schachner, M.
 Submitted to the EMBL Data Library, December 1991
 A:Description: Analysis of promoter activity and 5' genomic structure of the neural cell
 A:Reference number: S22167
 A:Accession: S22167
 A:Molecule type: DNA
 A:Residues: 1-165, 'L', 167-189, 'E', 191-281, 'S', 283-395, 'S', 397-514, 'A', 'PEKNPVDV', 524, 'GECHET
 A:Cross-references: EMBL:X63511
 C:Genetics:
 A:Insertions: 26/1; 31/1; 66/2; 133/1; 174/1; 231/1; 268/2; 330/1; 374/1; 422/1; 459/2
 A:Note: The list of insertions may be incomplete
 C:Superfamily: neural cell adhesion molecule 1; fibronectin type III repeat homology; in
 C:Keywords: alternative splicing; cell adhesion; duplication; glycoprotein; transmembrane
 F:1-19/Domain: signal sequence #status predicted <SIG>
 F:20-1260/Product: neural cell adhesion molecule #status experimental <MAT>
 F:256-313/Domain: immunoglobulin homology <IMM1>
 F:440-498/Domain: immunoglobulin homology <IMM2>
 F:531-592/Domain: immunoglobulin homology <IMM3>

Query Match 12.1%; Score 124; DB 1; Length 1260;

Best Local Similarity 25.2%; Pred. No. 0.053; Matches 52; Conservative 27; Mismatches 79; Indels 48; Gaps 8;

Qy 10 ILVLVQLALPPATQGNKVLGKKDYTELTCTASQKSIQ--FMKNSNQIKLGNQGS 67
 Db 507 ILANIQVAVKATQITQGPSALIEKKGARVTFQASFPDLSLQSTWRDGR----- 557
 Qy 68 FLTKPSKLNDRASRRSLMDQNFPLIKLIKIEDSDTYIC---EVEDQKEVQLIVF 123
 Db 558 -----DLQKGDSDKFIYEDK--LVIGSLDYSDDQNGVCSVASTEDVESRAQLIVV 608
 Qy 124 GLTAN-----SDTHLQSGSLTLTLEBPPSSPSVQCSR-----RGNIGGKTL 169
 Db 609 GSPGPVPHLELSDRLHLKQSQVHLISW-----SPADHNSPIEKYDIEPEDKEMAPKMF 662
 Qy 170 SVSQLELDSDGVTCTVLYLNQKKEF 195
 Db 663 SLQKV-----PQNOTSTTLKLSPPVHY 684

RESULT 15

JC4776
 A:Reference number: J504776
 A:Accession: JC4776
 A:Molecule type: mRNA
 A:Residues: 1-338 <PIM>
 A:Cross-references: UNIPROT:Q13449; GB:U41901; NID:91276698; PIDN:AAC50569.1; PID:912768;
 A:Experimental source: brain
 C:Comment: This is a neuronal surface glycoprotein distributed in cortical and subcortice
 C:Genetics:
 A:Gene: lamp
 C:Superfamily: carcinoembryonic antigen; carcinoembryonic antigen precursor amino-termina
 C:Keywords: brain; glycoprotein; membrane protein; phosphoprotein
 F:1-7/Domain: signal sequence #status predicted <SIG>
 F:338-338/Region: hydrophobic
 F:40,66,136,148,219,287,300,315/Binding site: carbohydrate (Asn) (covalent) #status predi
 F:42,115,142,164,171,220,231/Binding site: phosphate (Thr) (covalent) #status predicted
 F:95,192,204,236,310/Binding site: phosphate (Ser) (covalent) #status predicted

Query Match 11.5%; Score 118.5; DB 2; Length 338;
 Best Local Similarity 23.6%; Pred. No. 0.031;

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Matches 49; Conservative 35; Mismatches 91; Indels 33; Gaps 9;
Qy 10 LILVQLALIPAA-----TQNKVVLGKGDVLELTCTASQKKSIOFHWKNSNOIKI 61
Db 14 LVILRLCLLPFTGLPVRSVDNFRGTDNITVRQSDTALRLCVLEDKNS-KVAMLNRSGLIF 72
Qy 62 LGNQGSPFLTKGSPSKNDRA--DSRRSLMDQGNFPLIKNLKIEDSDTYICEVEDOKE--- 116
Db 73 AGHD-----KMSLDPRVELEKRHSI---EYSLRIQKVVDDEGSYTCSVQTHPEPT 121
Qy 117 -EYQLIVFG---LTANSDTHLQGSLLTLESPPGSSPSVQCR--SPRKNIQGGKT- 168
Db 122 SQVYLIVQVPPKISINISDVTVNEGSNVTLCWANGRPPEPVITWRHLPTGREFEGEHEEY 181
Qy 169 LSVSOLELDSDGTWTCTVLQNGKKVEEK 196
Db 182 LEILGITREOSGKRECKANENVSSADVK 209
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Job time : 17.3259 secs

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